



Controlling the Spread of Contagious Diseases:

Quarantine, Isolation and Social Distancing

People can be infected with dangerous diseases in a number of ways. Some germs, like those causing malaria, are passed to humans by animals. Other germs, like those that cause botulism, are carried to people by contaminated food or water. Still others, like the ones causing measles, are passed directly from person to person. These diseases are called "contagious."

Contagious diseases that pose a health risk to people have always existed. While the spread of many of these diseases has been controlled through vaccination and other public health efforts, terrorist acts worldwide have raised concerns about the possibility of a biological attack. That makes it important for people to understand what can and would be done to protect the public from the spread of dangerous contagious diseases.

The Centers for Disease Control and Prevention (CDC) is the U.S. government agency responsible for identifying, tracking and controlling the spread of disease. With the help of the CDC, state and local health departments have created emergency preparedness and response plans. In addition to early detection, rapid diagnosis and treatment with antibiotics or antivirals, strategies such as **quarantine, isolation,^{[*1*](#)}** and **social distancing**— are used to contain the spread of illness. These are common health care practices to control the spread of a contagious disease by limiting people's exposure to it.



The difference between quarantine and isolation can be summed up like this:

- *quarantine* applies to those who have been exposed to a contagious disease but who may or may not become ill.
- *isolation* applies to persons who are known to be ill with a contagious disease

What is “social distancing”?

Social distancing is the term used to describe various ways of slowing the spread of a pandemic flu by avoiding having people congregate in large groups where transmission of the flu to a lot of people would be likely. Closing schools and theatres, canceling large public events, etc. during a flu pandemic are examples of “social distancing”.

When someone is known to be ill with a contagious disease, they are placed in isolation and receive special care, with precautions taken to protect uninfected people from exposure to the disease.

When someone has been exposed to a contagious disease and it is not yet known if they have caught it, they may be quarantined or separated from others who have not been exposed to the disease. For example, they may be asked to remain at home to prevent further potential spread of the illness. They also receive special care and observation for any early signs of the illness.

When would quarantine and isolation be used and by whom?

If people in a certain area were potentially exposed to a contagious disease, this is what would happen: State and local health authorities would let people know that they may have been exposed and would direct them to get medical attention, undergo diagnostic tests and stay at home, limiting their contact with people who have not been exposed to the disease. Only rarely would federal, state or local health authorities issue an "order" for quarantine and isolation.

However, both quarantine and isolation may be conducted on a voluntary basis or compelled on a mandatory basis through legal authority.

States have the authority to declare and enforce quarantine and isolation within their borders. This authority varies widely, depending on state laws. It derives from the authority of state governments granted by the U.S. Constitution to enact laws and promote regulations to safeguard the health and welfare of people within state borders.

Further, at the national level, **the CDC may detain, medically examine or conditionally release persons suspected of having certain contagious diseases.**^{[*2*](#)} This authority applies to individuals arriving from foreign countries, including Canada and Mexico, on airplanes, trains, automobiles, boats or by foot. It also applies to individuals traveling from one state to another or in the event of "inadequate local control."^{[*3*](#)}



The CDC regularly uses its authority to monitor passengers arriving in the United States for contagious diseases. In modern times, most quarantine measures have been imposed on a small scale, typically involving small numbers of travelers (airline or cruise ship passengers) who have curable diseases, such as infectious tuberculosis or cholera. No instances of large-scale quarantine have occurred in the U.S. since the "Spanish Flu" pandemic of 1918-1919.

Based on years of experience working with state and local partners, the CDC anticipates that the need to use its federal authority to involuntarily quarantine a person would occur only in rare situations—for example, if a person posed a threat to public health and refused to cooperate with a voluntary request.^{[*4*](#)}

How long can quarantine and isolation last?
What is done to help the people who experience either?

Quarantine

Modern quarantine lasts only as long as necessary to protect the public by (1) providing public health care (such as immunization or drug treatment, as required) and (2) ensuring that quarantined persons do not infect others if they have been exposed to a contagious disease.

Modern quarantine is more likely to involve limited numbers of exposed persons in small areas than to involve large numbers of persons in whole neighborhoods or cities.

The duration and scope of quarantine measures would vary, depending on their purpose and what is known about the incubation period (how long it takes for symptoms to develop after exposure) of the disease-causing agent. Examples include:

A few hours for assessment. Passengers on airplanes, trains or boats believed to be infected with or exposed to a dangerous contagious disease might be delayed for a few hours while health authorities determine the risk they pose to public health. Some passengers may be asked to provide contact information and then released while others who are ill are transported to where they can receive medical attention. There have been a few instances where state and local public health authorities have imposed a brief quarantine at a public gathering, such as a shelter, while investigating if one or more people may be ill.



Enough time to provide preventive treatment or other intervention. If public health authorities determine that a passenger or passengers on airplanes, trains or boats are sick with a dangerous contagious disease, the other passengers may be quarantined in a designated facility where they may receive preventive treatment and have their health monitored.

For the duration of the incubation period. If public health officials determine that one or more passenger on airplanes, trains or boats are infected with a contagious disease and that passengers sitting nearby may have had close contact with the infected passenger(s), those at risk might be quarantined in a designated facility, observed for signs of illness and cared for under isolation conditions if they become ill.

Quarantined individuals will be sheltered, fed and cared for at home, in a designated emergency facility or in a specialized hospital, depending on the disease and the available resources. They will also be among the first to receive all available medical interventions to prevent and control disease, including:

- Vaccination.
- Antibiotics.
- Early and rapid diagnostic testing and symptom monitoring.
- Early treatment if symptoms appear.

Isolation

Isolation would last for the period of communicability of the illness, which varies by disease and the availability of specific treatment. Usually it occurs at a hospital or other health care facility or in the person's home. Typically, the ill person will have his or her own room and those who care for him or her will wear protective clothing and take other precautions, depending on the level of personal protection needed for the specific illness.

In most cases, isolation is voluntary; however, federal, state and local governments have the authority to require isolation of sick people to protect the public.

For more information, contact one of the following:

Centers for Disease Control and Prevention (<http://www.bt.cdc.gov/>)

Your local American Red Cross chapter (<http://www.redcross.org/where/where.html>)

Your state or local health department (www.cdc.gov/doc.do/id/0900f3ec80226c7a)



Definitions

Infectious disease: a disease caused by a microorganism and therefore potentially infinitely transferable to new individuals. May or may not be communicable. Example of non communicable is disease caused by toxins from food poisoning or infection caused by toxins in the environment, such as tetanus.

Communicable disease: an infectious disease that is contagious and which can be transmitted from one source to another by infectious bacteria or viral organisms.

Contagious disease: a very communicable disease capable of spreading rapidly from one person to another by contact or close proximity.

¹ The CDC applies the term "quarantine" to more than just people. They also use it to refer to any situation in which a building, conveyance, cargo or animal might also be thought to have been exposed to a dangerous contagious disease agent and is closed off or kept apart from others to prevent disease spread.

² The list of diseases for which quarantine is authorized must first be specified in an Executive Order of the President, on recommendation of the Secretary of Health and Human Services. Since 1983, this list has included cholera, diphtheria, infectious tuberculosis, plague, smallpox, yellow fever and viral hemorrhagic fevers. It was amended in April 2003 to include SARS.

³ Title 42 United States Code Section 264 (Section 361 of the Public Health Service [PHS] Act) gives the Secretary of the Department of Health and Human Services (HHS) responsibility for preventing the introduction, transmission and spread of contagious diseases from foreign countries into the United States and from one state or possession to another. This statute is implemented through regulations found at 42 CFR Parts 70 and 71. Under its delegated authority, CDC, through the Division of Global Migration and Quarantine, is empowered to detain, medically examine or conditionally release persons suspected of carrying specified contagious diseases.

⁴ For more information, see the CDC's "[Fact Sheet on Legal Authorities for Isolation/Quarantine](#)" and "[Questions and Answers on Legal Authorities for quarantine and isolation](#)."

